CLAIMS

What is claimed is:

1. A method of treating patients with epilepsy, movement disorders, or other indications, comprising:

implanting at least one system control unit (110) in a shallow recess of the mastoid area (143) of the skull (140) of a patient, wherein the at least one unit (110) is capable of controlling the delivery of at least one stimulus to at least one nerve affecting epilepsy, movement disorders, or other indications; and

applying the at least one stimulus to the at least one nerve in order to at least in part alleviate symptoms of epilepsy, movement disorders, or other indications of the patient being treated;

wherein the at least one nerve is selected from at least one of the body, branches, and roots of at least one of the vagus nerves (148), the trigeminal nerves (106), the ophthalmic nerves (118), the maxillary nerves (122), the mandibular nerves (146), the facial nerves (136), the glossopharyngeal nerves (138), and the trigeminal ganglion (102) or ganglia.

2. The method of Claim 1 wherein the system control unit (110) is connected to at least one electrode (152, 152'), and wherein the stimulus comprises electrical stimulation deliverable via the at least one electrode (152, 152').

3. The method of Claim 2 wherein the electrical stimulation is excitatory stimulation.

4. The method of Claim 2 wherein the electrical stimulation is inhibitory stimulation.

5. The method of Claim 1 further comprising sensing at least one condition and using the at least one sensed condition to automatically determine the stimulus to apply.

6. The method of Claim 1 wherein the system control unit (110) is connected to at least one catheter, and wherein the stimulus comprises drug infusion deliverable via the at least one catheter.

7. A system for patients with epilepsy, movement disorders, or other indications, comprising:

at least one lead (150, 150'), wherein the at least one lead includes at least one electrode (152, 152'); and

at least one system control unit (110) having a size and shape suitable for implantation in a recess in the mastoid area (143) of the skull (140), wherein the at least

one system control unit (110) comprises:

electronic circuitry (170) that generates stimulation pulses in accordance with prescribed stimulation parameters, which electronic circuitry (170) is operably connected to the at least one electrode (152, 152') through which the stimulation pulses may be delivered to tissue adjacent to the at least one electrode (152, 152');

programmable memory (175) for receiving and storing the prescribed stimulation parameters; and

a power source (180) for providing operating power to the electronic circuitry (170).

8. The system of Claim 7 wherein the system control unit (110) further comprises electronic circuitry and means for communicating with an external appliance (230).

9. The system of Claim 8 wherein the external appliance (230) is a Behind-the-Ear unit (100).

10. The system of Claim 9 wherein the Behind-the-Ear unit (100) includes electronic circuitry and means for communicating with a second external appliance.

11. The system of Claim 7 wherein the system control unit (110) is configured to conform to the profile of the mastoid area (143) of the skull (140).

12. The system of Claim 7 wherein the electronic circuitry (170) is configured to generate excitatory stimulation pulses.

13. The system of Claim 12 wherein the at least one electrode (152, 152') is configured to apply the stimulation pulses to at least one nerve of from at least one of the body, branches, and roots of at least one of the vagus nerves (148), the trigeminal nerves (106), the ophthalmic nerves (118), the maxillary nerves (122), the mandibular nerves 146), the facial nerves (136), the glossopharyngeal nerves (138), and the trigeminal ganglion (102) or ganglia.

14. The system of Claim 7 wherein the electronic circuitry is configured to generate inhibitory stimulation pulses.

15. The system of Claim 7 wherein the system control unit further comprises at least one sensor.

16. The system of Claim 15 wherein the system control unit is configured to use the

sensed condition to adjust the stimulation parameters.

17. The system of Claim 7 wherein the at least one lead includes at least one anchor.

18. The system of Claim 17 wherein the at least one anchor is at least one of a tine, a barb, and a suture sleeve.